

What is claimed is:

- 1 1. A method for backing up a biometrics-based authentication device comprising the
2 steps of:
3 obtaining a first encryption key;
4 enciphering lower tier data with said first encryption key to generate an encrypted
5 lower tier backup file;
6 obtaining a second encryption key; and
7 enciphering upper tier data with said second encryption key to generate an encrypted
8 upper tier backup file, wherein said lower tier data contain encrypted identification of a user
9 and authentication information associated therewith and wherein said upper tier data contain
10 biometrics data of said user and said lower tier data encrypted with said first encryption key.
- 1 2. The method according to claim 1, wherein
2 said authentication information comprises private keys and corresponding certificates.
- 1 3. The method according to claim 1, further comprising the step of:
2 generating a restore validation script for establishing restore requirements of said
3 upper tier data.
- 1 4. The method according to claim 3, wherein
2 said upper tier data further contain said restore validation script.
- 1 5. The method according to claim 1, further comprising the step of:
2 establishing a secure connection with a service bureau.
- 1 6. The method according to claim 5, further comprising the step of:
2 obtaining said first and said second encryption keys from said service bureau.

1 7. The method according to claim 1, further comprising the step of:
2 storing said encrypted lower tier backup file and said encrypted upper tier backup file
3 as one or more physical files.

1 8. A method for restoring onto a new biometrics-based authentication device said lower
2 tier data and said upper tier data according to claim 1, comprising the steps of:
3 enrolling new biometrics data of said user onto said new biometrics-based
4 authentication device;
5 obtaining an upper tier data decryption key;
6 deciphering said encrypted upper tier backup file with said upper tier data decryption
7 key to generate decrypted upper tier data including decrypted biometrics data;
8 determining, based on said decrypted biometrics data, whether said new biometrics
9 data are valid;
10 obtaining a lower tier data decryption key when said new biometrics data are valid;
11 deciphering said encrypted lower tier data with said lower tier data decryption key to
12 generate decrypted lower tier data; and
13 storing said decrypted lower tier data onto said new biometrics-based authentication
14 device.

1 9. The method according to claim 8, further comprising the steps of:
2 uploading said encrypted lower tier backup file and said encrypted upper tier backup
3 file onto said new biometrics-based authentication device;
4 obtaining an access clearance from a service bureau; and
5 establishing a secure connection with said service bureau using said access clearance.

1 10. The method according to claim 9, further comprising the step of:
2 obtaining said upper tier data decryption key and said lower tier data decryption key
3 from said service bureau.

1 11. The method according to claim 8, further comprising the step of:
2 verifying that said decrypted upper tier data have not been tampered or altered.

- 1 12. An apparatus for implementing the method according to claim 1 or 8, wherein
2 said apparatus is configured to perform the steps of claim 1 or 8.
- 1 13. An article of manufacture for implementing the method according to claim 1 or 8,
2 wherein said article of manufacture comprising a computer readable medium carrying
3 computer-executable instructions implementing the steps of claim 1 or 8.